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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _RCE 9/28/09_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _5,6,11,12,14-16 and 22-27_ is/are pending in the application.

    4a) Of the above claim(s) _1-4,7-10,13,17-21,28,29_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _5,6,11,12,14-16 and 22-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

Detailed Action

Claims 5,6,11,12,14,15,16,22-27 are pending in this application. Claims 1-4,7-

10,13,17-21,28,29 have been cancelled. This is a response to the

Amendment/Remarks/RCE filed on 9/28/09.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 5,6,11,12,14,15,16,22-27 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

As per claims 12,22,23, recites, the amended limitation, "the operating system

copied to the storage device from another device of the storage system is altered based

on one or more requirements associated with the diskless host computer", is unclear

and indefinite. There are two ways to interpret the claims, 1) the operating system is

being altered to a certain requirement or 2)the method/process of copying the operating

system is altered to a certain requirement, therefore it is unclear to what is being

altered.

All other claims are rejected based on it's dependency on the independent

claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 5,12,14,15,22-24,26,27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent 6,834,299 issued to Hamilton, II et al.(Hamilton) in view of

US Publication 2001/0047460 issued to Kobayashi et al.(Kobayashi) in further view of

US Patent 7,082,462 issued to Matsunami et al.(Matsunami) in further view of US

Patent 6,167,494 issued to Cheston et al.(Cheston) in further view of US Patent

6,292,941 issued to Jollands.

As per claim 12, Hamilton teaches a system for automatically configuring a

diskless host computer(Abstract), comprising: at least one diskless host computer that

automatically boots an operating system as a result of being connected to the

network(Fig.5, col.5, lines 32-67); a storage system on which are stored a plurality of

host configurations, each configuration including an operating system(Fig.5, col.6,lines

1-67); looking up a configuration corresponding to the received identifier and directing

the switch to provide the diskless host computer access to a storage device on which

the operating system identified in the configuration is stored(Abstract, col.7, lines 1-67).

Hamilton however does not explicitly teach diskless host computer being

physically connected to a network; a switch coupled to each diskless host computer and

having a plurality of ports, each port coupled to the storage system; and a control

station computer monitoring for receipt of an identifier transmitted by the diskless host

computer to the switch, accessing a database comprising a correspondence between

an identifier of each of a plurality of diskless host computers and a configuration

associated with the corresponding diskless host computer in order to look up a

configuration corresponding to the received identifier transmitted by the diskless host

computer; wherein the storage system is configured to copy the operating system to the

storage device, to which the switch provides the diskless host computer with access,

from another device of the storage system, and another device configured to maintain

an unaltered copy of the operating system.

Kobayashi teaches a switch coupled to each diskless host computer and having

a plurality of ports, each port coupled to the storage system(Fig.1); and a control station

computer monitoring for receipt of an identifier transmitted by the diskless host

computer to the switch(Fig.1, para.0024,026).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton to include a switch coupled to each

diskless host computer and having a plurality of ports, each port coupled to the storage

system; and a control station computer monitoring for receipt of an identifier transmitted

by the diskless host computer to the switch as taught by Kobayashi in order to remote

copy information(Kobayashi, para.0002).

One ordinary skill in the art would have been motivated to combine the teachings

of Hamilton and Kobayashi in order to remote copy information(Kobayashi, para.0002).

Hamilton in view of Kobayashi, does not explicitly teach diskless host computer being physically connected to a network; accessing a database comprising a correspondence between an identifier of each of a plurality of diskless host computers and a configuration associated with the corresponding diskless host computer in order to look up a configuration corresponding to the received identifier transmitted by the diskless host computer; wherein the storage system is configured to copy the operating system to the storage device, to which the switch provides the diskless host computer with access, from another device of the storage system, and another device configured to maintain an unaltered copy of the operating system.

Matsunami teaches diskless host computer being physically connected to a network(Fgi.6); accessing a database comprising a correspondence between an identifier of each of a plurality of diskless host computers and a configuration associated with the corresponding diskless host computer in order to look up a configuration corresponding to the received identifier transmitted by the diskless host computer(Figs.8-14, col.4, lines 10-19, col.8, lines 15-40; teaches looking up OS from LU to boot up a PC).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Hamilton in view of Kobayashi to include accessing a database comprising a correspondence between an identifier of each of a plurality of diskless host computers likely to be used in the system and a configuration associated with the corresponding diskless host computer in order to look looking up a

configuration corresponding to the received identifier as taught by Matsunami in order to boot up an OS from a storage system(Matsunami, col.4, lines 10-19).

One ordinary skill in the art would have been motivated to combine the teachings of Hamilton, Kobayashi, and Matsunami in order to boot up an OS from a storage system(Matsunami, col.4, lines 10-19).

Hamilton in view of Kobayashi in further view of Matsunami does not explicitly teach wherein the storage system is configured to copy the operating system to the storage device, to which the switch provides the diskless host computer with access, from another device of the storage system, and another device configured to maintain an unaltered copy of the operating system.

Cheston teaches storing a "known good" copy of an OS (Abstract, col.5, lines 15-29). The "known good" copy of an OS is considered to be the same as the "gold" copies as recited in the applicant's specification, page.10.

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Hamilton in view of Kobayashi in further view of Matsunami to include copying and storing a "known good" copy of an OS as taught by Cheston in order to recover from operating system corruption(Cheston, col.2, lines 35-38).

One ordinary skill in the art would have been motivated to combine the teachings of Hamiltion, Kobayashi, Matsunami, and Cheston in order to recover from operating system corruption(Cheston, col.2, lines 35-38).

Hamilton in view of Kobayashi in further view of Matsunami in further view of

Cheston does not explicitly teach wherein the operating system copied to the storage

device from another device of the storage system is altered based on one or more

requirements associated with the diskless host computer. Cheston, does teach,

copying, storing, and booting up a copy of an OS, col.5, lines 15-29).

Jollands explicitly teaches customization of an OS during installation based on

requirements of the user(col.1, lines 17-20).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton in view of Kobayashi in further view of

Matsunami in further view of Cheston to include customized installation of an OS as

taught by Jollands in order to install specific portions of an OS and/or customization of

an OS for a specific user's need/ hardware characteristics(Jollands, col.1, lines 21-36).

One ordinary skill in the art would have been motivated to combine the teachings

of Hamiltion, Kobayashi, Matsunami, Cheston, and Jollands in order to install specific

portions of an OS and/or customization of an OS for a specific user's need/ hardware

characteristics(Jollands, col.1, lines 21-36).

As per claim 22, Hamilton teaches a method for automatically booting a diskless

host computer upon being connected to a Fibre Channel network(Abstract), comprising:

looking up a configuration corresponding to the received identifier, wherein looking up a

configuration corresponding to an identifier further comprises(Fig.5, col.5, lines 32-col.6,

lines 67); querying by a control station computer the Fibre Channel switch for the WWN

received from the diskless host computer; (col.5, lines 31-67); providing the diskless

host computer access to a storage device on which the operating system is

stored(Fig.5, col.5, lines 32-col.6, lines 67); and the diskless host computer booting from

the operating system stored on the storage device in response to being connected to

network(Fig.5, col.5, lines 32-col.6, lines 67).

Hamilton however does not explicitly teach physically connecting the diskless

host computer to the network; receiving at a Fibre Channel switch a World Wide Name

(WWN) from the diskless host computer in accordance with a Fibre Channel log-in

protocol; accessing, by the control station computer, a database comprising a

correspondence between a WWN of each of a plurality of diskless host computers and

a configuration associated with the corresponding diskless host computer in order to

look up the configuration corresponding to the obtained, each WWN having a

corresponding configuration, said configuration identifying an operating system

associated with the diskless host computer; copying the operating system identified in

the configuration to a storage device from another storage device, said another storage

device configured to maintain an unaltered copy of the operating system.

Kobayashi teaches receiving at a Fibre Channel switch a World Wide Name

(WWN) from the diskless host computer in accordance with a Fibre Channel log-in

protocol (Fig.1, para.0024,026).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton to include receiving at a Fibre Channel

switch a World Wide Name (WWN) from the diskless host computer in accordance with

a Fibre Channel log-in protocol as taught by Kobayashi in order to remote copy

information(Kobayashi, para.0002).

One ordinary skill in the art would have been motivated to combine the teachings

of Hamilton and Kobayashi in order to remote copy information(Kobayashi, para.0002).

Matsunami teaches physically connecting the diskless host computer to the

network; accessing, by the control station computer, a database comprising a

correspondence between a WWN of each of a plurality of diskless host computers and

a configuration associated with the corresponding diskless host computer in order to

look up the configuration corresponding to the obtained, each WWN having a

corresponding configuration, said configuration identifying an operating system

associated with the diskless host computer(Figs.8-14, col.4, lines 10-19, col.8, lines 15-

40).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton in view of Kobayashi to include

accessing a database comprising a correspondence between an identifier of each of a

plurality of diskless host computers likely to be used in the system and a configuration

associated with the corresponding diskless host computer in order to look looking up a

configuration corresponding to the received identifier as taught by Matsunami in order to

boot up an OS from a storage system(Matsunami, col.4, lines 10-19).

One ordinary skill in the art would have been motivated to combine the teachings

of Hamilton, Kobayashi, and Matsunami in order to boot up an OS from a storage

system(Matsunami, col.4, lines 10-19).

Hamilton in view of Kobayashi in further view of Matsunami does not explicitly

teach copying the operating system identified in the configuration to a storage device

from another storage device, said another storage device configured to maintain an

unaltered copy of the operating system and booting from booting from the operating

system copied.

Cheston teaches storing a "known good" copy of an OS and booting from up with

the "known good" copy of the OS(Abstract, col.5, lines 15-29).   The "known good" copy

of an OS is considered to be the same as the "gold" copies as recited in the applicant's

specification, page.10.

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton in view of Kobayashi in further view of

Matsunami to include copying, storing, and booting up a "known good" copy of an OS

as taught by Cheston in order to recover from operating system corruption(Cheston,

col.2, lines 35-38).

One ordinary skill in the art would have been motivated to combine the teachings

of Hamiltion, Kobayashi, Matsunami, and Cheston in order to recover from operating

system corruption(Cheston, col.2, lines 35-38).

Hamilton in view of Kobayashi in further view of Matsunami in further view of

Cheston does not explicitly teach wherein the operating system copied to the storage

device from another device of the storage system is altered based on one or more

requirements associated with the diskless host computer. Cheston, does teach,

copying, storing, and booting up a copy of an OS, col.5, lines 15-29).

Jollands explicitly teaches customization of an OS during installation based on requirements of the user(col.1, lines 17-20).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Hamilton in view of Kobayashi in further view of Matsunami in further view of Cheston to include customized installation of an OS as taught by Jollands in order to install specific portions of an OS and/or customization of an OS for a specific user's need/ hardware characteristics(Jollands, col.1, lines 21-36).

One ordinary skill in the art would have been motivated to combine the teachings of Hamiltion, Kobayashi, Matsunami, Cheston, and Jollands in order to install specific portions of an OS and/or customization of an OS for a specific user's need/ hardware characteristics(Jollands, col.1, lines 21-36).

As per claim 5, the method claimed in claim 22, wherein the control station queries the Fibre Channel switch in response to a notification received from the host via an Internet Protocol (IP) network(Hamilton, Abstract, Fig.5, Kobayashi, para.0024). Motivation to combine set forth in claim 22.

As per claim 14, the system claimed in claim 12, wherein the identifier is a World Wide Name (WWN) received from the host in accordance with a Fibre Channel log-in protocol, and wherein each WWN corresponds to a configuration(Hamilton, Abstract, col.5, line 32-67, Fig.1, para.0024,026). Motivation to combine set forth in claim 12.

As per claim 15, system claimed in claim 14, wherein the a control station computer queries the Fibre, Channel switch for the WWN and looks up the configuration in a database in response to the WWN(Hamilton, Fig.5, col.5, lines 31-col.6, lines 67).

As per claim 24, the method claimed in claim 23, wherein the network comprises an IP network(Kobayashi, para.0024). Motivation to combine set forth in claim 22.

As per claim 26, the method claimed in claim 23, wherein the network comprises a Fibre Channel network(Kobayashi, Abstract). Motivation to combine set forth in claim 22.

As per claim 27, the method claimed in claim 26, wherein the identifier is unique to an adapter used to connect the diskless computer to the network(Hamilton, col.5, lines 31-col.6, line 67).

As per claim 23, do not teach or further define over the limitations in claims 12,22. Therefore claim 23 is rejected for the same reasons set forth above.

Claims 6,25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,834,299 issued to Hamilton, II et al.(Hamilton) in view of US Publication 2001/0047460 issued to Kobayashi et al.(Kobayashi) in further view of US Patent 7,082,462 issued to Matsunami et al.(Matsunami) in further view of US Patent 6,167,494 issued to Cheston et al.(Cheston) in further view of US Patent 6,292,941 issued to Jollands in further view of US Patent 6,810,478 issued to Anand et al.(Anand).

Hamilton in view of Kobayashi in further view of Matsunami in further view of Cheston in further view of Jollands does not explicitly teach as per claims 6, 25, using DHCP protocol.

Anand teaches using DHCP protocol(col.43-50).

Therefore it would have been obvious to one ordinary skill in the art at the time of

the invention to modify the teachings of Hamilton in view of Kobayashi in further view of

Matsunami in further view of Cheston in further view of Jollands to include using DHCP

protocol as taught by Anand in order to improve flexibility for configuration of computers

attached to a network(Anand, col.1, lines 43-49)..

One ordinary skill in the art would have been motivated to combine the teachings

of Hamilton, Kobayashi, Matsunami, Cheston, Jollands and Anand in order to improve

flexibility for configuration of computers attached to a network(Anand, col.1, lines 43-

49).

Claims 11,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

US Patent 6,834,299 issued to Hamilton, II et al.(Hamilton) in view of US Publication

2001/0047460 issued to Kobayashi et al.(Kobayashi) in further view of US Patent

7,082,462 issued to Matsunami et al.(Matsunami) in further view of US Patent

6,167,494 issued to Cheston et al.(Cheston) in further view of US Patent 6,292,941

issued to Jollands in further view of US Patent 6,343,287 issued to Kumar et al.(Kumar).

Hamilton in view of Kobayashi in further view of Matsunami in further view of

Cheston in further view of Jollands however does not teach as per claim 11,16, wherein

the database uses the lightweight directory access protocol (LDAP).

Kumar teaches the use of LDAP for a database(Fig.3).

Therefore it would have been obvious at the time of the invention to one ordinary

skilled in the art to modify Hamilton in view of Kobayashi in further view of Matsunami in

further view of Cheston in further view of Jollands to use LDAP for a database as taught

by Kumar in order to comb through data to find a particular piece of information.

One ordinary skilled in the art at the time of the invention would have been

motivated to combine the teachings of Hamilton , Kobayashi, Matsunami, Cheston,

Jollands, and Kumar in order to provide a system to us a network protocol designed to

work on TCP/IP stacks to extract information.

Response to Arguments

Applicant's arguments with respect to claims 5,6,11,12,14,15,16,22-27

have been considered but are moot in view of the new ground(s) of rejection, however

to help advance prosecution of the case, the examiner will respond to the applicant's

argument of, Hamilton in view of Kobayashi in further view of Matsunami in view of

Cheston, does not teach, "a database comprising a correspondence between an

identifier......identifying the OS associated with the diskless host computer.

Firstly, a database as well known in the art is merely a collection of logically

related records or files consolidated into a common pool that provides data for one or

more multiple users.

Hamilton, col.1, lines 5-10, 42-67,teaches a system for configuring a storage

area network, where each server in the network may have different OS, e.g.Solaris,

UNIX, Windows. Further, each server may connect to a SAN Fibre Channel with the

use of a Host Bus Adapater(HBA). Each HBA have a unique identifier called the WWN.

A SAN can be configured with the appropriate OS, col.5, lines 55-63.

Matsunami, Fig.8-14,col.5, lines 5-19, teaches a Management Table which contains Computer Identifier, Target ID, Virtual LUN, Internal LUN, and Attributes correspond to the Computer Identifier, e.g.a database. Col.4, lines 10-19, col.8, lines 15-40 teaches looking up OS from LU to boot up a PC for each corresponding LU there is a specific OS stored. Col.9, lines 38-45, teaches that each PC can use different OS with different versions and or different type of Shared OS.

The applicant further argues that, the LUN Management Table does not define the OS(e.g.SOLARIS, LINUX, AIX, etc). The claim language however only associates a the identifier to a configuration, in which at least Hamilton and Matsunami teaches for a specific WWN Identifier, a specific OS is used to boot up.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BACKHEAN TIV whose telephone number is (571)272-5654. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2451
12/7/09
/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451